



# State Air Pollution Control Board

## Final Exempt Regulation: Low Emissions and Zero Emissions Vehicle Standards, 9VAC5 Chapter 95 (Rev. MR)

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December 2, 2021

# Background – Federal Law

- § 209 of the federal Clean Air Act
  - California has the unique authority to maintain motor vehicle emission standards that are stricter than federal standards.
  - California's Low-Emission Vehicle (LEV) standards control tailpipe emissions of criteria and greenhouse gas pollutants.
  - As part of its larger Advanced Clean Cars Program, California's Zero Emission Vehicles (ZEV) program requires major manufacturers of passenger cars and light trucks to produce and deliver for sale a certain number of ZEVs.

# Background – Federal Law

- § 177 of the federal Clean Air Act
  - Enables other states to adopt California LEV and ZEV standards
    - States must adopt 2 years before standard becomes effective; gives manufacturers and distributors lead time to comply
    - State rules must be identical to California rules
  - California, Colorado, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, and Washington plus the District of Columbia have adopted California LEV and ZEV standards
  - Washington, Minnesota, New Mexico, Nevada, and now Virginia are going through the adoption process

# Background – Virginia Law

- Chapter 263 of the 2021 Virginia Acts of Assembly requires:
  - That the board adopt by regulation any model year standards relating to the control of emissions from new motor vehicles or new motor vehicle engines, including low emissions vehicle (LEV) and zero emissions vehicle (ZEV) standards pursuant to § 177 of the federal Clean Air Act
  - That this regulation allow a motor vehicle manufacturer to establish a ZEV credit account into which proportional credits will be deposited
  - That this regulation be exempt from the Administrative Process Act

# Background – Virginia Law

- Proportional credits:
  - Auto manufacturers doing business in Virginia will provide a certain number of ZEVs each year to dealerships in the state.
  - Manufacturers are awarded credits for each ZEV brought to the state for sale, based on features like how far the vehicle can go on a single charge and whether the vehicle is a plug-in hybrid or fully electric.
  - Those credits are then retired in a given year to demonstrate compliance with the standard
  - The standard increases annually, and manufacturers are required to bring more electric vehicles into the state each year or retire credits in that year to satisfy the standard.
  - If a manufacturer does not sell enough ZEVs, the manufacturer can purchase credits from other manufacturers that had a surplus
  - To date, all manufacturers have met or exceeded the standards

# What is LEV?

- Requires light- and medium-duty vehicles to meet standards that are stricter than federal standards
  - Passenger cars – vehicles designed to transport up to 12 people
  - Light-duty trucks – vehicles weighing less than 8,500 pounds
  - Medium-duty passenger vehicles – vehicles weighing less than 10,000 pounds
  - Medium-duty trucks, vans, SUVs
- Becomes increasingly strict over time
- Originally controlled criteria pollutants ( $\text{NO}_x$ , CO, PM); now also covers greenhouse gas (GHG) pollutants
- Manufacturers must deliver new light- and medium-duty vehicles for sale into Virginia that are certified to meet California LEV standards
- Dealers in Virginia are required to sell California certified or 50-state compliant vehicles for Virginia registration

# What is ZEV?

- Requires manufacturers to offer for sale specific numbers of the cleanest cars:
  - battery electric (run on batteries that are recharged with electricity)
  - fuel cell (run on electricity from a fuel cell of compressed hydrogen)
  - plug-in hybrid (combine a gasoline-powered engine with a battery that can be recharged with electricity)
- Becomes increasingly strict over time
- Controls GHG pollutants
- Number of ZEVs each year is based on the total number of cars sold in California by the manufacturer
- Requirements are in terms of percent credits. Each vehicle manufactured receives credits based on its electric driving range. The more range, the more credit.
- Manufacturers subject to ZEV: BMW, Fiat Chrysler, Ford, General Motors, Honda, Hyundai, Kia, Mercedes, Nissan, Toyota, Volkswagen; Jaguar Land Rover, Mitsubishi, Mazda, Subaru and Volvo must also comply but may meet their obligation with plug-in hybrids
- Manufacturers are allowed to carry over excess credits from one year to the next (banking), and can purchase or trade ZEV credits from each other

# Clean Car Applicability

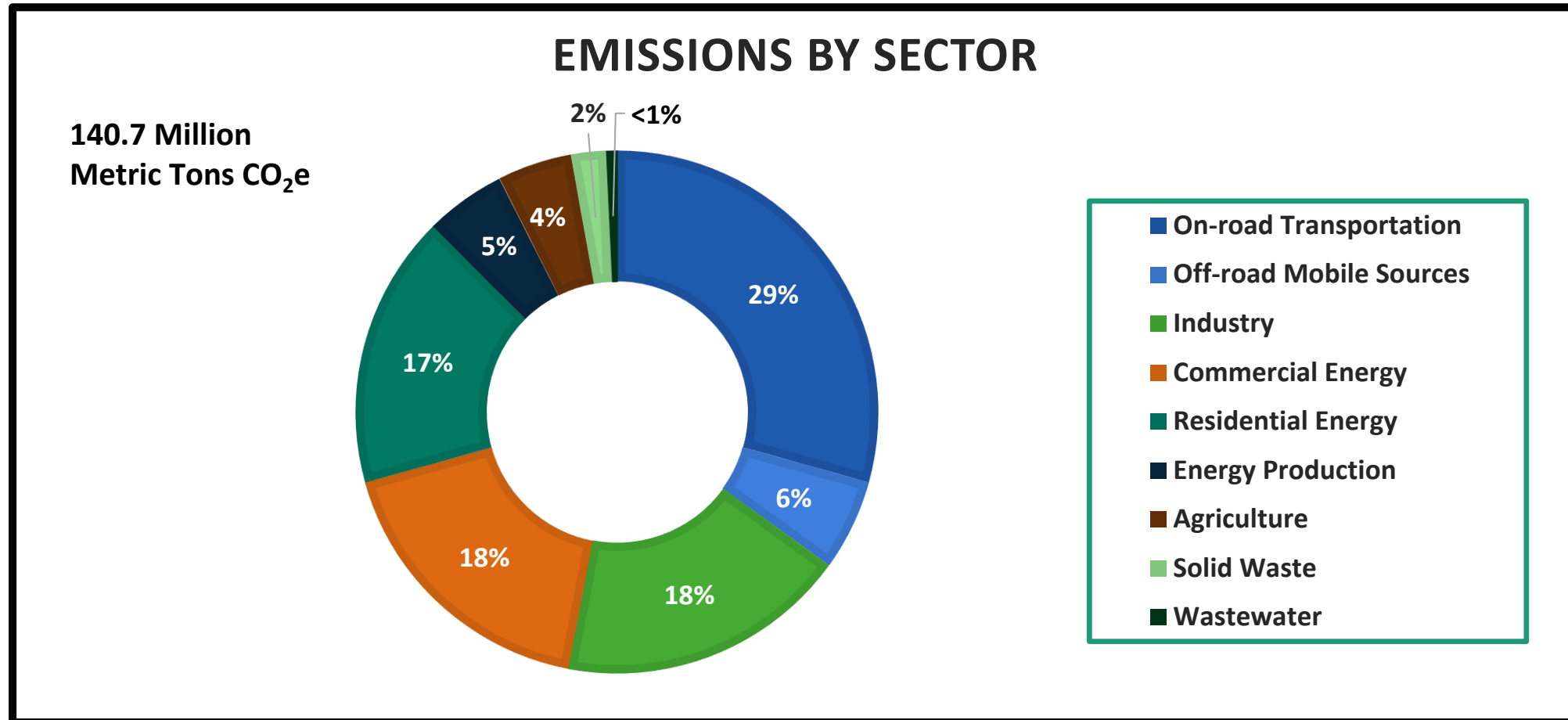
- **Applies to new, light- and medium-duty vehicles for sale in Virginia: 452 new car dealerships**
- **Does *not* apply to:**
  - Volvo, Mack Truck, and Morgan Olson (large truck manufacturers)
  - Off-road or heavy-duty vehicles or equipment, like farm equipment or semi-trucks
  - Existing vehicles or used vehicles for sale
- **Does *not* require emissions testing**
- **Does *not* require anyone to purchase an EV**
- **Does make it much easier to purchase an EV**



# Why Clean Cars?

- Supports the statutory goal of net-zero carbon emissions in Virginia for all sectors by 2045
- The transportation sector is the largest source of air pollution in the Commonwealth
- The majority of these emissions come from on-road motor vehicles
- The power sector is already being reduced by the RGGI and VCEA
- These two sectors combined represent most of VA's carbon emissions

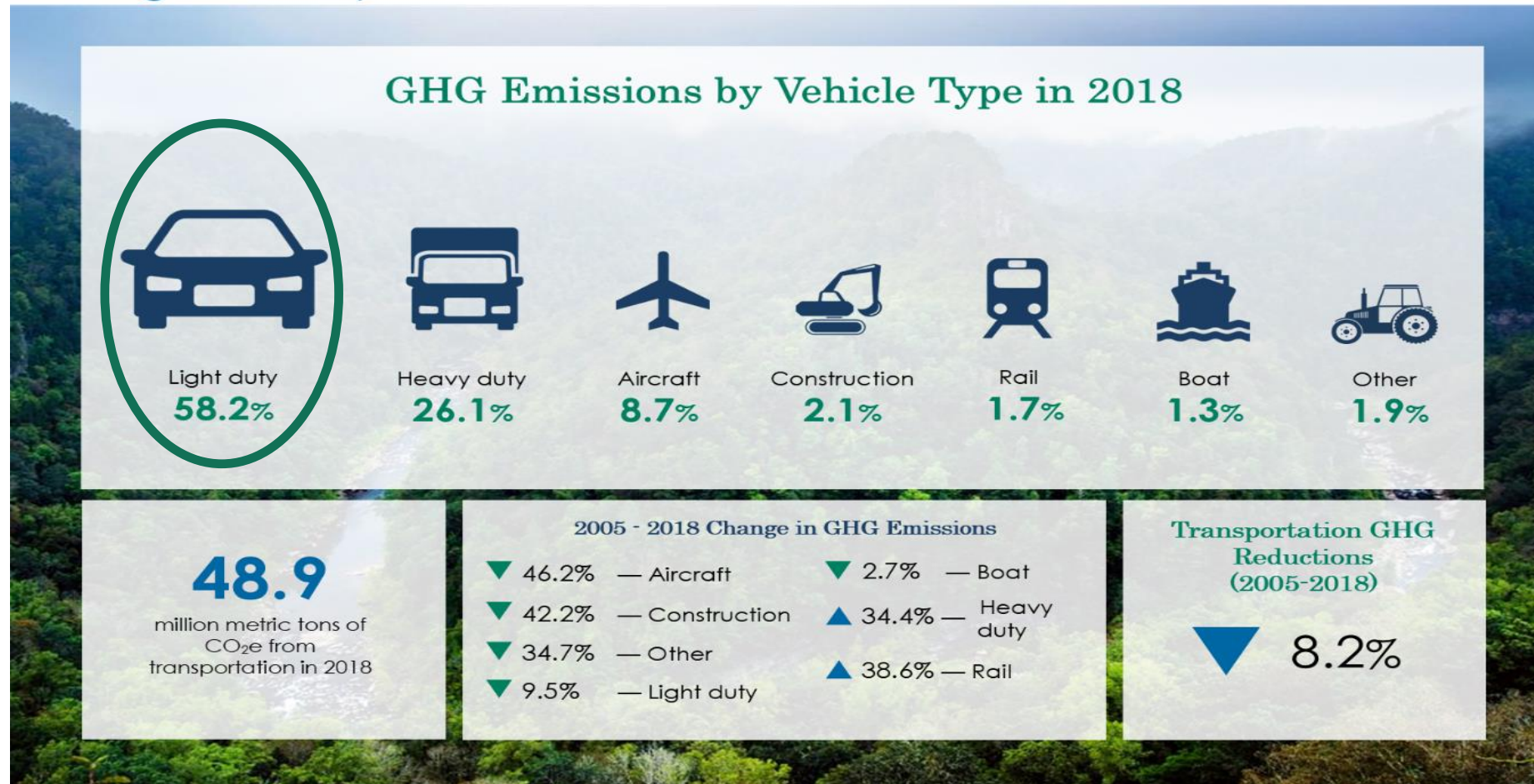
# Virginia 2018 Greenhouse Gas Emissions Inventory



# Transportation Sector GHG Emissions Breakdown

2005-2018

Virginia Transportation GHG Emissions



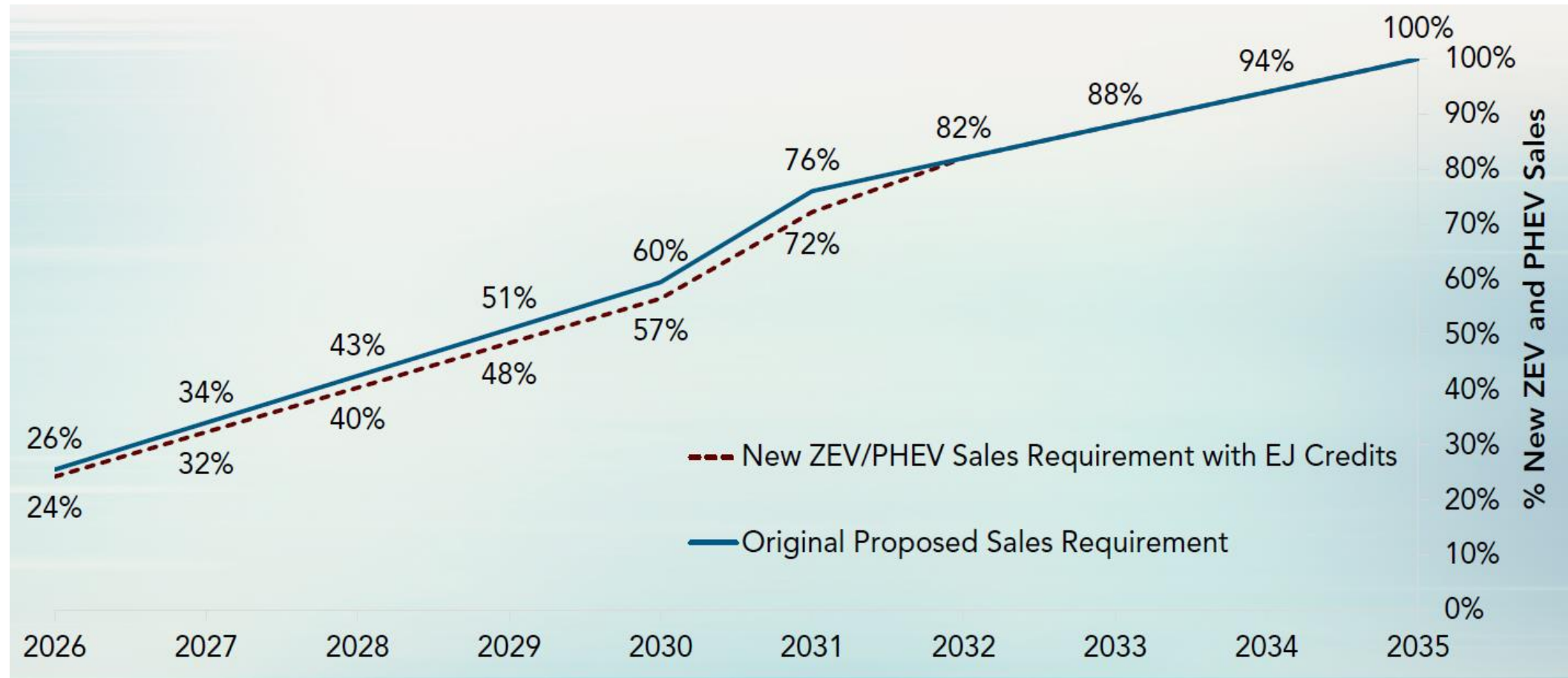
# Clean Car Benefits

- LEV reduces criteria pollutant and GHG emissions
  - Will help control ozone (smog) pollution statewide and in the northern Virginia ozone nonattainment area
  - Will help control PM and GHG pollution statewide
- ZEV reduces GHG emissions
  - Will protect public health and welfare from global warming effects
- Consumers save money through reduced operating expenses over the life of the vehicle, primarily through reduced fuel use
- Consumers benefit from California's longer emission's warranty coverage and more comprehensive, high-cost emissions-related parts warranty

# How the Program Works

- California adopts its standards, effective as of each “model year”
- § 177 states adopt the California standards by reference
- There can only be two programs in place: either the federal, or California
- Virginia:
  - Law requires program start with MY25
  - Adopting today in order to meet the § 177 requirement for adoption 2 years in advance
  - Will be adopted but not effective until filed with the Registrar
  - Will become effective early 2024
- Future updates:
  - CA is updating its standards for MY26; effective late 2022
  - VA rule automatically updates (“...and subsequent model years.”)

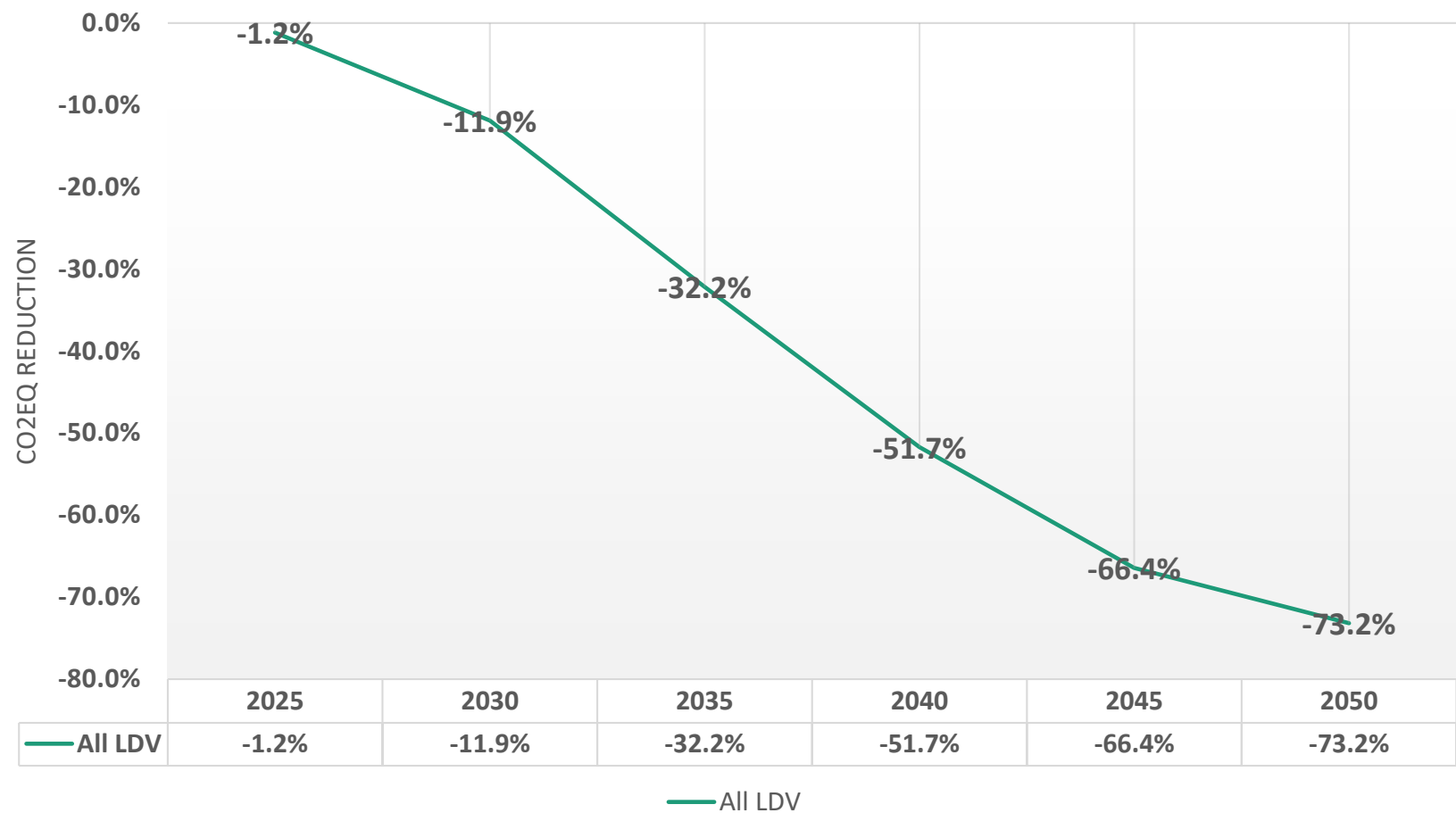
# Zero Emissions Vehicle Requirements





# Cumulative GHG Reductions with Increasing EV Penetration

- Increasing percentage of new light duty EV sales begins in 2025 and reaches 100 percent in 2035
- Light duty EV sales remain at 100 percent after 2035
- Light duty EV sales percentages based on California ACC program
- Future year statewide VMT and VPOP projections prepared using VMT growth rates provided by VDOT
- Statewide average vehicle age distribution
- All other MOVES inputs based on 2017 NEI



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2040	2045	2050
ZEV Sales	22%	26%	34%	43%	51%	60%	76%	82%	88%	94%	100%	100%	100%	100%

# Regulation Development

- Exempt from the APA by statute
- Stakeholder review:
  - California Air Resources Board (CARB)
  - Northeast States for Coordinated Air Use Management (NESCAUM)
  - Alliance for Automotive Innovation
  - Natural Resources Defense Council (NRDC)
  - Southern Environmental Law Center (SELC)



# Regulation Development, Amendments

- Primarily correction of typographical errors
- 9VAC5-95-30 C - the text is removed because it appears to exclude certain criteria pollutants, which is not the intent of the legislation. Text now includes all criteria pollutants as regulated by CARB.
- 9VAC5-95-40 B - amended to more accurately reflect the CARB requirement, which specifies generation of ZEV credits

# Today's Action

- Creates a new Chapter 95 to meet the requirements of the 2021 Acts of Assembly
- Incorporates CARB requirements by reference
- Otherwise identical to CARB/other § 177 states

# Adoption Process

- The regulation is exempt from the state administrative procedures for adoption of regulations contained in the Administrative Process Act by the provisions of Chapter 95 of the 2021 Acts of Assembly

# Department Recommendation

- That the board adopt the proposal
- That the board direct the department to file the regulation with the Registrar of Regulations such that the regulation becomes effective after January 1, 2024